AMENDMENTS TO THE CLAIMS

1-33. (canceled)

34.   (Currently Amended) An image processing system comprising:

an image providing apparatus which defines a location information indicating a plurality of regions in image data for embedding a digital watermark in all regions containing a document information a desired region among the plurality of regions and providing said image data, in which said digital watermark is embedded based on said location information; and

an image utilizing apparatus which extracts said digital watermark from said image data provided by said image providing apparatus based on said location information, and verifies whether of said image data in said desired regionregions, in which said digital watermark is embedded, has been tampered.

35.   (Currently Amended) An image processing system comprising:

an image providing apparatus which recognizes a format for indicating a plurality of regions in image data and provides said image data in which a digital watermark is embedded in all regions containing a document informationa desired region among the plurality of regions based on said format; and

an image utilizing apparatus which recognizes said format of said image data, extracts said digital watermark from said desired regionregions based on said format, and verifies whether said image data in said desired regionregions in said image data, in which said digital watermark is embedded, has been tampered.

36.   (Previously Presented)   An image processing system as claimed in claim 34 or 35, wherein said image providing apparatus provides said image data in which a different kind of said digital watermark is embedded in a different region in said image data.

37.   (Previously Presented)   An image processing system as claimed in claim 36, wherein said image providing apparatus provides said image data in which a different kind of said digital

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watermark is embedded according to an image quality in each region where said digital watermark is embedded.

38. (Previously Presented)   An image processing system as claimed in claim 34, wherein:
    said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper; and
    said image utilizing apparatus extracts said digital watermark with said message digest from said image data based on said location information, and generates a corresponding message digest using said specific information in said provided image data, and detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

39. (Previously Presented)   An image processing system as claimed in claim 34, wherein:
    said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper and a location information of a region for embedding a message digest corresponding to said specific information; and
    said image utilizing apparatus extracts said digital watermark with said message digest from said image data based on said location information, generates a corresponding message digest using said specific information in said provided image data, and detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

40. (Original)   An image processing system as claimed in claim 39, wherein said region for embedding said message digest corresponding to said specific information is independent of said region for displaying said specific information necessary for detecting said tamper.

41. (Previously Presented)   An image processing system as claimed in claim 34, wherein:
    said location information is registered in both of said image providing apparatus and said image utilizing apparatus;

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said image providing apparatus embeds said digital watermark in said image data based on said registered location information; and

said image utilizing apparatus extracts said digital watermark from said image data based on said registered location information.

42.   (Previously Presented)   An image processing system as claimed in claim 34, wherein:
said image providing apparatus transfers said location information to said image utilizing apparatus;

said image providing apparatus embeds said digital watermark in said image data based on said location information to be transferred; and

said image utilizing apparatus extracts said digital watermark from said image data based on said location information transferred from said image providing apparatus.

43.   (Currently Amended) An image providing apparatus comprising:
a location defining means which defines a location information indicating a plurality of regions in image data for embedding a digital watermark in all regions containing a document information a desired region among the plurality of regions in said image data; and

a providing means which provides said image data in which said digital watermark is embedded based on said location information.

44.   (Currently Amended) An image providing apparatus comprising:
a format recognizing means which recognizes a format for indicating a plurality of regions in image data; and

a providing means which provides said image data in which a digital watermark is embedded in all regions containing a document information a desired region among the plurality of regions based on said format.

45.   (Previously Presented)   An image providing apparatus as claimed in claim 43 or 44,

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wherein said providing means provides said image data in which a different kind of said digital watermark is embedded in a different region in said image data.

46. (Previously Presented)   An image providing apparatus as claimed in claim 45, wherein said providing means provides said image data in which a different kind of said digital watermark is embedded according to an image quality in each region where said digital watermark is embedded.

47. (Original)   An image providing apparatus as claimed in claim 43, wherein said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper and a location information of a region for embedding a message digest corresponding to said specific information.

48. (Original)   An image providing apparatus as claimed in claim 47, wherein said region for embedding said message digest corresponding to said specific information is independent of said region for displaying said specific information necessary for detecting said tamper.

49. (Currently amended) An image providing apparatus as claimed in claim 43, further comprising:

    an image utilizing apparatus that includes:

        an inputting means which inputs said image data;

        an extracting means which extracts said digital watermark from said image data based on said location information; and

        a verifying means which verifies whether said image data in said ~~desired~~ ~~region~~regions, in which said digital watermark is embedded, has been tampered.

50. (Currently amended) An image providing apparatus as claimed in claim 44, further comprising:

    an image utilizing apparatus that includes:

        an inputting means which inputs said image data;

an extracting means which extracts said digital watermark from said ~~desired region~~regions based on said format; and

a verifying means which verifies whether said image data in said ~~desired region~~regions, in which said digital watermark is embedded, has been tampered.

51.   (Previously Presented)   An image utilizing apparatus as claimed in claim 49, further comprising a generating means which generates a corresponding message digest using said specific information in said input image data, and wherein:

said extracting means which extracts said digital watermark with said message digest from said image data based on said location information; and

said verifying means which detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

52.   (Currently Amended) A recording medium storing a program to be executed by a computer, said program comprising:

a location defining module which defines a location information indicating a plurality of regions in image data for embedding a digital watermark in <u>all regions containing a document information</u> ~~a desired region~~ among the plurality of regions in said image data; and

a providing module which provides said image data in which said digital watermark is embedded based on said location information.

53.   (Currently Amended) A recording medium storing a program to be executed by a computer, said program comprising:

a format recognizing module which recognizes a format indicating a plurality of regions in image data; and

a providing module which provides said image data in which a digital watermark is embedded in <u>all regions containing a document information</u> ~~a desired region~~ among the plurality of regions based on said format.

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54.   (Previously Presented)   A recording medium as claimed in claim 52 or 53, wherein said providing module provides said image data in which a different kind of said digital watermark is embedded in a different region in said image data. `

55.   (Previously Presented)   A recording medium as claimed in claim 54, wherein said providing module provides said image data in which a different kind of said digital watermark is embedded according to an image quality in each region where said digital watermark is embedded.

56.   (Original)   A recording medium as claimed in claim 52, wherein said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper and a location information of a region for embedding a message digest corresponding to said specific information.

57.   (Original)   A recording medium as claimed in claim 56, wherein said region for embedding said message digest corresponding to said specific information is independent of said region for displaying said specific information necessary for detecting said tamper.

58.   (Currently amended) A recording medium as claimed in claim 52, said program further comprising:
        an inputting module which inputs said image data;
        an extracting module which extracts said digital watermark from said image data based on said location information; and
        a verifying module which verifies whether said image data in said ~~desired region~~regions, in which said digital watermark is embedded, has been tampered.

59.   (Currently amended) A recording medium as claimed in claim 53, said program further comprising:
        an inputting module which inputs said image data;

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an extracting module which extracts said digital watermark from said ~~desired region~~regions based on said format; and

a verifying module which verifies whether said image data in said ~~desired region~~regions, in which said digital watermark is embedded, has been tampered.

60.   (Previously Presented)   A recording medium as claimed in claim 58, further comprising a generating module which generates a corresponding message digest using said specific information in said input image data, and wherein:

said extracting module which extracts said digital watermark with said message digest from said image data based on said location information; and

said verifying module which detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

61.   (Currently Amended) An image verifying method comprising:

inputting image data in which a location information indicates a plurality of regions in said image data for embedding a digital watermark in all regions containing a document information ~~a desired region~~ among said plurality of regions in said image data;

extracting said digital watermark from said image data based on said location information; and

verifying whether said image data in said ~~desired region~~regions, in which said digital watermark is embedded, has been tampered.

62.   (Currently Amended) An image verifying method comprising:

inputting image data;

recognizing said format of said image data, said format indicating a plurality of regions in said image data for embedding a digital watermark in all regions containing a document information ~~a desired region~~ among the plurality of regions;

extracting said digital watermark from said ~~desired region~~regions based on said format; and

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verifying whether said image data in said ~~desired region~~regions, in which said digital watermark is embedded, has been tampered.

63.   (Previously Presented)   An image verifying method as claimed in claim 61, further comprising generating a corresponding message digest using said specific information in said input image data, and wherein:

said extracting said digital watermark extracts said digital watermark with said message digest from said image data based on said location information; and

said verifying tampering detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

64.   (Previously Presented)   An image processing system as claimed in claim 34, wherein said digital watermark includes a digital watermark information that is extractable by using a watermark key that includes an authentication information which authenticates said image data provided by an valid provider, and said watermark key of said image data, and wherein

said image utilizing apparatus which extracts said digital watermark information from said image data provided by said image providing apparatus using said watermark key provided by said image providing apparatus, verifies whether said watermark key has been tampered or not using said authentication information in said watermark key, verifies whether said image data has been tampered or not using said verified watermark key, and displays said verified image data.

65.   (Previously Presented)   An image processing system as claimed in claim 35, wherein said digital watermark includes a digital watermark information that is extractable by using a watermark key that includes an authentication information which authenticates said image data provided by an valid provider, and said watermark key of said image data, and wherein

said image utilizing apparatus which extracts said digital watermark information from said image data provided by said image providing apparatus using said watermark key provided by said image providing apparatus, verifies whether said watermark key has been tampered or not using

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said authentication information in said watermark key, verifies whether said image data has been tampered or not using said verified watermark key, and displays said verified image data.

66.   (Previously Presented)   The image processing system according to claim 34, wherein a density of said digital watermark is adjusted to a quality of said image data.

67.   (Previously Presented)   The image processing system according to claim 66, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

68.   (Previously Presented)   The image processing system according to claim 35, wherein a density of said digital watermark is adjusted to a quality of said image data.

69.   (Previously Presented)   The image processing system according to claim 68, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

70.   (Previously Presented)   The image providing apparatus according to claim 43, wherein a density of said digital watermark is adjusted to a quality of said image data.

71.   (Previously Presented)   The image providing apparatus according to claim 70, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

72.   (Previously Presented)   The image providing apparatus according to claim 44, wherein a density of said digital watermark is adjusted to a quality of said image data.

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73.   (Previously Presented)   The image providing apparatus according to claim 72, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

74.   (Previously Presented)   The image utilizing apparatus according to claim 49, wherein a density of said digital watermark is adjusted to a quality of said image data.

75.   (Previously Presented)   The image utilizing apparatus according to claim 74, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

76.   (Previously Presented)   The image providing apparatus according to claim 50, wherein a density of said digital watermark is adjusted to a quality of said image data.

77.   (Previously Presented)   The image providing apparatus according to claim 76, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

78.   (Previously Presented)   The recording medium according to claim 52, wherein a density of said digital watermark is adjusted to a quality of said image data.

79.   (Previously Presented)   The recording medium according to claim 78, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

80.   (Previously Presented)   The recording medium according to claim 53, wherein a density of said digital watermark is adjusted to a quality of said image data.

81.   (Previously Presented)   The recording medium according to claim 80, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

82.   (Previously Presented)   The recording medium according to claim 58, wherein a density of said digital watermark is adjusted to a quality of said image data.

83.   (Previously Presented)   The recording medium according to claim 82, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

84.   (Previously Presented)   The recording medium according to claim 59, wherein a density of said digital watermark is adjusted to a quality of said image data.

85.   (Previously Presented)   The recording medium according to claim 84, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

86.   (Previously Presented)   The image verifying method according to claim 61, wherein a density of said digital watermark is adjusted to a quality of said image data.

87.   (Previously Presented)   The image verifying method according to claim 86, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

88.   (Previously Presented)   The image verifying method according to claim 62, wherein a density of said digital watermark is adjusted to a quality of said image data.

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89.   (Previously Presented)   The image verifying method according to claim 88, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

90.   (Previously Presented)   The image processing system according to claim 64, wherein a density of said digital watermark is adjusted to a quality of said image data.

91.   (Previously Presented)   The image processing according to claim 90, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

92.   (Previously Presented)   The image processing system according to claim 65, wherein a density of said digital watermark is adjusted to a quality of said image data.

93.   (Previously Presented)   The image processing according to claim 92, wherein a data amount of said digital watermark for a character is smaller that one for an other type of information in said image data.

94.   (Currently Amended) The image processing system according to claim 34, wherein said ~~desired region~~regions include at least one of character information or image information.

95.   (Currently Amended) The image processing system according to claim 94, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

96.   (Currently Amended) The image processing system according to claim 35, wherein said regions include~~desired region~~ at least one of character information or image information.

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97.   (Currently Amended) The image processing system according to claim 96, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

98.   (Currently Amended) The image providing apparatus according to claim 43, wherein said regions include~~desired region~~ at least one of character information or image information.

99.   (Currently Amended) The image processing system according to claim 98, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

100.   (Currently Amended) The recording medium according to claim 52, wherein said <u>regions</u> include~~desired region~~ at least one of character information or image information.

101.   (Currently Amended) The recording medium according to claim 100, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

102.   (Currently Amended) The recording medium according to claim 53, wherein said <u>regions</u> include~~desired region~~ at least one of character information or image information.

103.   (Currently Amended) The recording medium according to claim 102, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

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104.   (Currently Amended) The image verifying method according to claim 61, wherein said regions include~~desired region~~at least one of character information or image information.

105.   (Currently Amended) The image verifying method according to claim 104, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

106.   (Currently Amended) The image verifying method according to claim 62, wherein said regions include~~desired region~~at least one of character information or image information.

107.   (Currently Amended) The image verifying method according to claim 106, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

108.   (Currently Amended) The image providing apparatus according to claim 44, wherein said regions include ~~desired region~~at least one of character information or image information.

109.   (Currently Amended) The image providing apparatus according to claim ~~109~~108, wherein a density of said digital watermark embedded in a ~~desired~~ region comprising character information is smaller that a density of said digital watermark embedded in a ~~desired~~ region comprising image information.

110.   (New) The image processing system according to claim 34, wherein said image processing apparatus further comprises means for storing said document information.

111.   (New) The image processing system according to claim 35, wherein said image processing apparatus further comprises means for storing said document information.

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112.   (New) The image providing apparatus according to claim 43, further comprising:
        means for storing said document information.

113.   (New) The image providing apparatus according to claim 44, further comprising:
        means for storing said document information.

114.   (New) The recording medium according to claim 52, said program further comprising:
        a storing module which stores said document information.

115.   (New) The recording medium according to claim 53, said program further comprising:
        a storing module which stores said document information.

116.   (New) The image verifying method according to claim 61, further comprising:
        storing said document information.

117.   (New) The image verifying method according to claim 62, further comprising:
        storing said document information.